



THE TIMES OF INDIA

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TODAY'S EDITION

➤ From studying regularly for weekly tests to practising sample question papers, a student shares tips on how to score big in exams
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➤ As Sri Lankan President flees his country to avoid arrest, students debate on 'should runaway heads of state be given asylum by neighbouring countries?'
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➤ Philips, Ferguson star in Kiwis' win over Ireland in the first T20
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STUDENT EDITION
WEDNESDAY, JULY 20, 2022

TICKER-TAPE

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DELHI, LONDON could run out of water amid rising heatwave

As heatwave strikes the UK, and Indian cities battle with record temperatures, a recent report from Christian Aid highlights how the climate crisis is increasing the severity of drought in 10 of the world's major cities comprising London and Delhi and demands an international fund to pay for climate caused loss and damage. The 10 cities featured in the report, which was first published in May, are Sydney, Harare, Sao Paulo, Phoenix, Beijing, Kabul, New Delhi, Cape Town, Cairo and London. The danger of city droughts is only set to get worse without action to address climate change, the report warned.

The charity has warned that without action to cut emissions and better management of freshwater resources, the toll will be felt acutely by the poor



How can you make a difference in **SAVING WATER?** Let's have a few **OUT OF THE BOX IDEAS** FROM YOU. Please send your article (75 words), poster, slogan, illustration, etc on 'Save Water' at toinie175@gmail.com, along with your name, class, school and your photograph. The best

three entries in each category will be published in Toistudent print and online edition



■ The report analysis shows global water use grew at more than twice the rate of population increase over the course of the 20th century
■ In fact, last month, there was water rationing in the Chilean capital, Santiago, and people were queuing up for water in New Delhi where temperatures rose so high that heatstroke remained a risk even without any physical activity
■ In 2018, after an extended drought, Cape Town came within days of becoming the first major city in the world to run out of water. 'Day Zero', when the taps for four million inhabitants would be turned off, was averted after emergency measures were implemented to cut the city's water usage by 50%
■ Even in the UK, London has experienced heatwaves in recent years. Experts have warned that within 25 years, London and the South East of England could run out of water

Despite water covering more than 70 per cent of the earth's surface, only three per cent of it is suitable for drinking. Of this freshwater, 70 per cent is locked in glaciers and ice caps. Less than 0.01 per cent of all freshwater sources is available for human use in lakes, rivers and reservoirs

DID YOU KNOW? ing the first major city in the world to run out of water. 'Day Zero', when the taps for four million inhabitants would be turned off, was averted after emergency measures were implemented to cut the city's water usage by 50%
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Rupee drops past 80/dollar for the first time ever

The rupee on Tuesday dropped to the psychologically-important mark of 80 against the US dollar, taking its year-to-date fall to about 7 per cent. The domestic currency hit a low of 80.0175 in early trade compared with the previous close of 79.9775. The value of the Indian rupee has depreciated by around 25 per cent against the dollar since December 2014, and the recent fall is due to global factors like soaring crude oil prices and the Russia-Ukraine conflict.



UK, France face hottest day as Europe burns

Britain and France went on heatwave alert on Monday facing record temperatures, as Europe wilted under a scorching sun and ferocious wildfires devoured more forests. UK forecasters warned of havoc in a country unprepared for the onslaught of extreme heat that authorities said was putting lives at risk. Britain's government triggered a "national emergency" alert as temperatures reached a record 39.1 degree Celsius on Tuesday.



Experts find dormant black hole near our galaxy

A stellar-mass black hole has been discovered in the Large Magellanic Cloud, a galaxy, which is the neighbour of the Milky Way Galaxy. This discovery was made by a group of international experts, who are renowned for disproving other black hole discoveries. They also discovered that the star that created the black hole disappeared without leaving any traces of a massive explosion. The discovery was made possible by six years of observations made with the Very Large Telescope of the European Southern Observatory (ESO) (VLT).

THIS DAY THAT YEAR

JULY 20

NATIONAL MOON DAY



National Moon Day commemorates the day man first walked on the Moon in 1969. NASA reported the moon landing as being "...the single-greatest technological achievement of all time." Armstrong's "one small step for man" inspired imaginations and sparked innovation for generations to come.

■ On July 20, 1969, Apollo 11 carried the first humans to the Moon. Six hours after landing on the Moon, American astronaut Neil Armstrong stepped onto the lunar surface. He spent two-and-a-half hours outside the spacecraft.

■ Buzz Aldrin soon followed, stepping onto the lunar surface. After joining Armstrong, the two men collected 21.5 kg of lunar material. Their specimens made the journey back to Earth, to be analysed later

■ The other person linked to the important mission was Command module pilot Michael Collins, who flew the Command Module Columbia alone in lunar orbit, as he waited for the other two

Armstrong and Aldrin spent over 21 hours on the lunar surface at a site they named Tranquility Base before they lifted off to rejoin Collins in the command module Columbia. The trio returned to Earth and landed in the Pacific Ocean on July 24 after more than eight days in space

Q What are your thoughts on moon exploration? Share your views at toinie175@gmail.com



JAMES WEBB SPACE TELESCOPE CAPTURES A DAY'S WORTH OF DATA ON 68 GB OF MEMORY

The James Webb Space Telescope, which has already wowed the world with gorgeous images of far-flung galaxies and distant planets, stores its data on a relatively small 68 GB drive, enough to hold only a day's worth of images. The JWST can send data back to Earth at 28 megabytes



The JWST is a million miles from Earth at Lagrange point L2, where it must contend with radiation and temperatures of about -370 degrees Fahrenheit

per sec, according to Carl Hansen, a flight systems engineer at the Space Telescope Science Institute. The speed of data transfer means that all the new information can be beamed back to Earth in about four and a half hours. JWST collects far more data than Hubble ever was capable of: 57 GB versus 1-2 GB per day

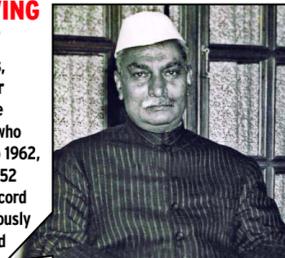
TALE OF INDIAN PRESIDENTS

As the country awaits its 15th President, we take a look at our former presidents and how they played an important role in shaping India's destiny...

SINCE INDIA BECAME A REPUBLIC IN 1950, 14 PRESIDENTS HAVE SERVED THE COUNTRY

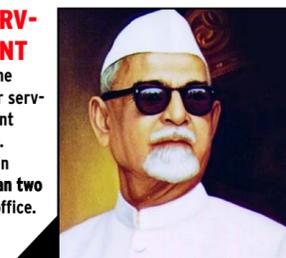
LONGEST-SERVING PRESIDENT

At 12 years and 107 days, India's first President, **Dr Rajendra Prasad**, had the longest tenure. Prasad, who held office from 1950 to 1962, was re-elected in the 1952 and 1957 elections by record margins. He was unanimously elected in 1950, 1952 and re-elected in 1957.



SHORTEST-SERVING PRESIDENT

Zakir Husain became the President in 1967, after serving as the Vice President under S Radhakrishnan. However, he remained in office for little less than two years before dying in office. Husain's Presidential tenure is the shortest in India's history.



PRESIDENTS WHO DIED WHILE IN OFFICE

Two Presidents, **Zakir Husain** and **Fakhruddin Ali Ahmed**, have died in office. Notably, both served less than three years in office. While Zakir Husain died on May 3, 1969, Fakhruddin Ali Ahmed died on February 11, 1977.

UNOPPOSED PRESIDENT

Neelam Sanjiva Reddy was elected as the President unopposed after the nomination papers of 36 other aspirants were rejected. Thus, no Presidential election was held in 1977. Interestingly, Reddy was the official Congress candidate in the 1969 election but narrowly lost to VV Giri.

INTERIM PRESIDENTS

Varahagiri Venkata Giri, Mohammad Hidayatullah and Basappa Danappa Jatti served as acting Presidents. In 1969, Chief Justice Mohammad Hidayatullah served as the acting President for 35 days. After Zakir Husain's death, VP VV Giri took over as the acting president but resigned in less than three months to contest the Presidential election. After Fakhruddin Ali Ahmed's death in February 1977, VP BD Jatti took over as the acting President for over five months.



CONSISTENCY, the key to achieving your goals



The key to any long-term accomplishment is consistency. This plays a crucial role in academics too.

STEADY PACE

To study at a regular pace throughout the year would be greatly beneficial than to cluster everything towards the final examinations. Consistency can come in many ways, like having regular attendance during classes and methodically studying for all the tests that schools conduct. This could be weekly tests or cyclic tests.

KNOW YOUR SYLLABUS

Since academic boards are yet to revise the syllabus for the present batches now regularly attending physical school, it is important to be aware of the deleted portions and the exam pattern for the year. This helps in planning the study schedule effectively.



MULTIPLE RESOURCES
It is always good to carry out a research into the required study

material well. There are many YouTube channels and resourceful websites, and I think one must make good use of all these resources. Teachers also recommend a few subject guides for students to prepare from, so having all these books and materials from the beginning of the year would be beneficial.

QUESTION PAPER BANK

Taking out time to browse through previous year question papers would be helpful too. These could be of use as and when one completes the portion and starts preparing for exams. Having our study schedule well planned out would not only help us excel in academics, it would also leave us with enough time to spend on co-curricular activities that we are interested in. All the best for the academic year!

TRISHA BOORUGU,
class XII, Delhi
Public School,
Nacharam,
Hyderabad



A clean sweep

I have carried out many experiments, done projects and made robots, but the Cleaning Robot is my favourite. I got the inspiration to make this robot when the lockdown started and there was no help at home. We had to do all the dusting and cleaning. Purchasing a robot was expensive. So, I decided to make a robot that could help us clean the house.

Some of its parts are common and can be found at home and some need to be bought online. All these parts can be purchased at a price of ₹ 3,791. If you purchase a robot, it would be ten times the expense.



HOW IT FUNCTIONS

A transmitter is used that acts as a remote and transmits data. The input is received by the receiver. There are some ports in the receiver where we can attach the motors for it to perform the output function.



Science

Electronic radio transmission.

What function can it perform?

It can mop your entire house.

How is it controlled?

It has a remote that can be used to control it.

Sensors

No, it does not have sensors.

COMPONENTS NEEDED

1 9v alkaline battery x 2 - These alkaline batteries can give an output of 9 volts. It provides more than the required output to run the bot.

2 Rx and TX x1 - TX means transmitter. RX is receiver. If you need to send any command to the robot, the TX block helps it to send the data you input. The data is then received by the receiver and gives an output which intends to clean your house.

3 Driver + motor x 4 - The driver means the circuit board which decides the required output needed to run the motor.

4 Power block x2 - The power block is the circuit to which you connect the battery.

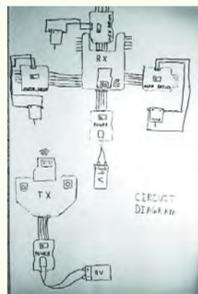
5 Scotch bright wiping pad x 1 - This is the pink mop in front of the robot which cleans the house.

6 Waste cardboard - This is used to give a shape and base to the bot.

7 Wheels x 4 -

Wheels are used for the smooth movement of the robot from one place to another.

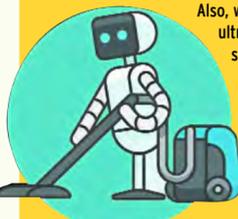
The circuit diagram shows the representation of the electronic parts present in it.



MANUAL VS AUTO

Yes, it needs to be monitored constantly but if you want it to work on its own, that is also possible. We can replace the TX and RX with Arduino UNO. Arduino UNO can act as a brain of the robot.

Also, we can add a servo and an ultrasonic sensor. The sensor can be used to see all the things around it and the servo can help to move the sensor.



AHAN AGARWAL, class VI,
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OF FIRMS AND FIGURES



EXAMS
Rfun

CLASS: XII
SUBJECT:
ACCOUNTANCY (CBSE)
MARKS: 30

PAPER SET BY UDGAM TEAM, UDGAM SCHOOL FOR CHILDREN, AHMEDABAD

(ACCOUNTING FOR NOT-FOR-PROFIT ORGANISATIONS, PARTNERSHIP FIRMS AND COMPANIES)

Q(1) Distinguish between 'Receipt and Payment Account' and 'Income and Expenditure Account' on the following bases: [2]

- (i) Capital and Revenue Items.
(ii) Nature of Account.

Q(2) Ankit, Bobby and Kartik were partners in a firm sharing profits in the ratio 4:3:3. The firm was dissolved on 31st March, 2020. Pass the necessary Journal entries for the following transactions after various assets (other than cash and bank) and third-party liabilities had been transferred to Realisation Account: [2]

- (i) A liability under a suit for damages included in creditors was settled at ₹32,000 as against only ₹13,000

provided in the books. Total creditors of the firm were ₹50,000.
(ii) Kartik's Loan of ₹12,000 was settled at ₹12,500.

Q(3) Priya, Reema and Seema were partners in a firm sharing profits in the ratio of 3:2:1. On 1st April, 2020 Seema retired and the new profit-sharing ratio between Priya and Reema was 1:2. On Seema's retirement, goodwill of the firm was valued at ₹30,000. Pass necessary Journal entry for the treatment of Goodwill on Seema's retirement. [2]

Q(4) Following information is given by Heritage Club for the year 2020-21. [3]

Particulars	Amounts (₹)
General Fund	20,00,000
Building Fund	10,00,000
9% Building Fund Investment	10,00,000
Donation received for Building	5,00,000
Interest received on Building Fund Investment	45,000
Expenditure made on construction of Building (Work-in-Progress)	4,50,000
Interest received on general Fund	20,000

Show the accounting treatment of the above-mentioned items in the Balance Sheet of the Heritage Club as at 31st March, 2021.

Q(5) Dinkar, Navita and Vani were partners having fixed capitals of ₹6,00,000; ₹4,00,000 and ₹2,00,000 respectively. They share their profits in ratio 4:1:1. Navita died on 30th June, 2021. Her share of profit for the intervening period was based on the sales of previous year which were ₹6,00,000 and profit earned during the year was ₹60,000. Sales till the date of her death was ₹2,40,000. The firm closes its books on 31st March every year. Calculate Navita's share of profit and pass the necessary Journal entry. [3]

Q(6) Rahul Ltd. purchased a business of Rinku for ₹5,00,000. The business consists of Machinery ₹2,00,000; Computer ₹1,00,000 Debtors ₹50,000; stock ₹1,50,000 and Trade Payable ₹1,00,000. Rahul Ltd issued 400, 9% Debentures of ₹1,000 each at a discount of 10% and balance by cheque on 1st July, 2020. Pass necessary Journal entries for the year ended on 31st March, 2021. [3]

Q(7) Following is the Balance Sheet of Vinit and Yogesh as on 31st March, 2021. [5]



BALANCE SHEET AS ON 31st March, 2021

LIABILITIES	Amounts (₹)	ASSETS	Amounts (₹)
Creditors	3,60,000	Bank	80,000
Mrs. Vinit's Loan	60,000	Stock	70,000
Yogesh's Loan	1,00,000	Investment	1,00,000
Employees provident Fund	30,000	Fixed Assets	3,80,000
Capitals:		Debtors 2,00,000	
Vinit	2,00,000	Less: Provision for	
Yogesh	1,00,000	Doubtful Debts (20,000)	1,80,000
		Profit and Loss A/c	40,000
	8,50,000		8,50,000

The firm was dissolved on 31st March, 2021. The assets were realised and the liabilities were paid as under.

- (a) Vinit promised to pay off Mrs. Vinit's Loan and took away stock @20% discount.
(b) Yogesh took away investment at 150%.
(c) Sunil, a debtor of ₹50,000 had to pay the amount due 3 months after the date of dissolution. He was allowed a discount of 5% for making payment immediately. The remaining debtors were collected in full.
(d) Creditors were paid ₹3,50,000 in full settlement of their claim.
(e) Fixed Assets realised ₹2,82,000.
(f) There was an old furniture which has been written off completely from the books. Yogesh took away the same for ₹4,000.
(g) Yogesh's loan was paid and settled at a discount of ₹2,500.

(h) Realisation expenses ₹2,000 were paid by Vinit. Prepare Realisation account.

Q(8) Rahul Ltd is in the business of manufacturing electrical water pumps. They decided to install some Godrej refrigerators and microwave ovens of ₹23,00,000 in the company for providing facilities to its employees as the company is located in remote area.

On 1st April, 2021 the purchase price of electrical appliances was paid by issuing 6% Debentures of ₹100 each at a premium of 15%. Rahul Ltd further issued 200 4% Debentures of ₹1,000 each at a discount of 10% and redeemable at a premium of 5% on the same date to public. [5]

You are required to answer the following questions:

- (a) Pass the Journal entry for issue of Debenture to public.
(b) Pass the Journal entry for payment to Vendor.
(c) Calculate the amount of annual fixed obligation associated with Debentures.
(d) Prepare Loss on Issue of Debenture Account.

Q(9) Following is the Receipts and Payments Account of Dee Club for the year ended 31st March 2019: [5]

Receipts and Payments Account for the year ended 31 st March 2019			
Dr.			Cr.
Receipts	Amounts (₹)	Payments	Amounts (₹)
To Balance b/d (cash)	2,000	By Salaries	42,500
To Subscriptions		By 9% Investments	3,000
2018	1,200		
2019	49,200		
2020	2,300		
	52,700		
To sale of old Furniture (Book value ₹800)	500	By Furniture (1.10.2018)	15,000
To Donation for Prizes	43,000	By Printing and stationery	21,500
To interest on Investment	650	By Balance b/d(cash)	16,850
	98,850		98,850

You are requested to prepare Income-Expenditure Account of the Club for the year ending 31-03-2019 after taking into account the following information:

- (a) The club has 400 members, each member paying an annual subscription of ₹150.
(b) Salaries paid included ₹3,150 for the year 2017-18 and outstanding salaries for the year 2018-19 were ₹4,250.
(c) 9% investment were made on 30th November, 2018. The club had a sim-

ilar investment of ₹8,000 in the beginning of the year.

- (d) Depreciate furniture @10% p.a. Sale of furniture is to be excluded.

These questions are meant for practice purpose only. Students are advised to check format, syllabus and marks for Board test papers with their teachers. Questions have been given by teachers and NIE is not responsible for them.